Before the
Federal Communications Commission
Washington DC 20554

In the Matter of	)	
	)	
Amendment of Part 15 of the Commission's	)	ET Docket No. 98-156
Rules to Allow Certification of Equipment	)	
in the 24.05-24.25 GHz Band at Field	)	
Strengths up to 2500 mV/m	)	

OPPOSITION TO PETITION FOR RECONSIDERATION OF
ARRL, THE NATIONAL ASSOCIATION FOR AMATEUR RADIO

OF

INTERSIL CORPORATION
SYMBOL TECHNOLOGIES, INC.
WIRELESS ETHERNET COMPATIBILITY ALLIANCE
XTREMESPECTRUM, INC.

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Pursuant to Section 1.429(f) of the Commission's Rules, the following parties hereby oppose the Petition for Reconsideration of ARRL, the National Association for Amateur Radio, filed in this docket on February 13, 2002 (ARRL Petition):[1]

> ***Intersil Corporation***, the leading manufacturer of integrated circuit chipsets for wireless networking applications;
>
> ***Symbol Technologies, Inc.***, a global leader in mobile data transaction systems, providing solutions based on wireless local area networking for data, voice, and application-specific mobile computing;
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> ***Wireless Ethernet Compatibility Alliance (WECA)***, an association of more than 150 manufacturers and service providers that certifies interoperability of Wi-Fi (IEEE 802.11) products and promotes the Wi-Fi standard; and
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> ***XtremeSpectrum, Inc.***, the leading manufacturer of ultra-wideband chipsets for communications applications.

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[1] *See Petition for Reconsideration of Action in Rulemaking Proceeding*, Report No. 2546 (released April 24, 2002).

A. Summary

ARRL challenges the Commission's authority to allow unlicensed devices under Part 15 of its rules. ARRL's objection rests mainly on two contentions: the asserted lack of an express grant of authority in the Communications Act; and ARRL's reading of certain statutory provisions as prohibiting unlicensed operation, save for four enumerated exceptions.

ARRL is wrong on both counts. The Act authorizes unlicensed operation under Part 15; and nothing in the Act bars it.

Section 302a of the Act authorizes the Commission to "make reasonable regulations [] governing the interference potential of devices which in their operation are capable of emitting radio frequency energy . . . ."[2] This plainly authorizes unlicensed devices under regulations that control their interference potential, as the Part 15 rules do.

Even if the statutory language were unclear, however, the Commission's Part 15 Rules still must prevail under any of several lines of cases:

- The Commission's interpretation of its own statute is entitled to great deference.
- Deference to the Commission is even greater where, as here, the agency acts in the exercise of its particular technical expertise.
- The Commission has independent authority to "fill in the gaps" in its statute, particularly in a fast-moving technological environment.
- Congress has repeatedly ratified unlicensed operation by leaving those rules in place for more than 60 years, while routinely amending other parts of the statute.

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[2] 47 U.S.C. Sec. 302a(a).

As if to resolve any doubt, Congress inserted language in a 1997 amendment that excluded from auction any frequency bands that were allocated or authorized for "unlicensed use pursuant to part 15 of the Commission's regulations."[3] ARRL thus has the difficult task of arguing that Part 15 exceeds the Commission's statutory authority, in the face of a statute that specifically protects Part 15 operations.

Finally, ARRL tries to argue that the Communications Act permits only four enumerated services to operate without licenses, none of which is Part 15. Those four services, however, were all licensed at one time. The statute merely authorizes the Commission to "de-license" them, subject to other Commission rules. Nothing in these provisions excludes other unlicensed operation.

In short, ARRL has no legal support for its view that Part 15 lacks authorization. The Commission must deny the Petition.

B. The Commission Should Read ARRL's Petition as Applying Only to Unlicensed Transmitters of Significant Power.

In ARRL's view, the Commission lacks statutory authority to approve unlicensed devices that have significant potential for interference to licensed radio services, including Amateur Radio services.[4]

On its face, ARRL's objection reaches much farther than the 24 GHz rule adopted in this proceeding. The issue, says ARRL, is whether "a device which has substantial interference

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[3] Balanced Budget Act of 1997, P.L. 105-33 Section 3002(c)(1)(C)(v), 11 Stat. 261 (1997).

[4] ARRL Petition at 1.

potential to licensed radio services must be *licensed* in order to operate."[5] Given that nearly all unlicensed operation in non-Government spectrum uses the same frequencies as do licensed radio services, ARRL's Petition seems to call into question the lawfulness of unlicensed devices in general.

The Commission authorizes two categories of unlicensed equipment: intentional radiators (*i.e.*, transmitters), which intentionally generate and emit radio-frequency (RF) energy; and unintentional radiators, which intentionally generate RF for internal use, but do not intentionally emit it.[6] The latter category is extremely large. It includes, for example, all digital devices and most receivers.

ARRL opposes unlicensed operation of any emitter, whether intentional or unintentional, having "substantial interference potential" to a licensed radio service."[7] The intended scope is unclear. An Amateur receiver (for example) could experience substantial interference even from a digital device such as an ordinary computer, if its antenna is close enough to the computer, and if it happens to be tuned to the same frequency as the computer's clock frequency (or a multiple or submultiple). Does ARRL seek to require licensing for every computer sold, along with every CD player, Palm-type organizer, digital camera, alarm clock, etc.? Another example: most unlicensed cordless telephones manufactured today use the 900 MHz or 2.4 GHz band, both of which are shared with the Amateur Radio Service. These phones operate at only a few milliwatts, but presumably could interfere with an Amateur receiver under appropriate

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5 ARRL Petition at 5 (emphasis in original).

6 *See* 47 C.F.R. Secs. 15.3(o), (z).

7 ARRL Petition at 5.

conditions. Does ARRL want these to be licensed as well, along with wireless headphones and speakers, cordless computer mice and keyboards, and all the other millions of consumer transmitters at 900 MHz and 2.4 GHz?

The Commission's unhappy experience with Citizens Band radios showed the impracticability of licensing a product that consumers adopt by the millions.[8] If ARRL believes that computers, cordless phones, and all other radio-based consumer devices must be licensed, then it effectively asks that they be removed from the market.

We think ARRL is wrong, but not irrational. We therefore read its Petition as accepting the lawfulness of unlicensed unintentional radiators, and even very low-powered intentional radiators. We assume ARRL is challenging only unlicensed transmitters above some minimum power. Under this reading, we will not burden the Commission by arguing at length either the lack of interference potential or the public interest in unintentional radiators and very low-powered transmitters.[9]

C. The Commission Correctly Construes the Communications Act as Authorizing Unlicensed Operation.

1. Section 302a authorizes the Commission's Part 15 regulations.

In pertinent part, Section 302a of the Communications Act provides:

> The Commission may, consistent with the public interest, convenience, and necessity, make reasonable regulations (1) governing the interference potential of devices which in their operation are capable of emitting radio

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[8] See Part E.2, below.

[9] If our reading is incorrect, and ARRL really does contest the lawfulness of personal computers and the like, then we request an additional comment cycle to address those issues.

> frequency energy by radiation, conduction, or other means in sufficient degree to cause harmful interference to radio communications . . . .[10]

The Commission cites this provision as authorizing its Part 15 rules.[11] ARRL disagrees.[12] But ARRL does not contest the Commission's authority to approve *non-interfering* devices.[13] And in fact the Commission has promulgated an extensive regulatory scheme intended precisely to protect licensed services against harmful interference from Part 15 devices.[14] Those regulations have worked well: actual interference to the Amateur service, and all other licensed users, is vanishingly rare.

(ARRL is thus mistaken in criticizing the Commission's "reliance" on a rule requiring an unlicensed device to shut down if it causes interference.[15] The Commission relies not on this "aftermarket" remedy, but rather on detailed and stringent technical regulations and pre-approval requirements that prevent interference in the first instance. Section 15.5 is a back-up which, thanks to the success of the technical rules, is rarely invoked.)

The ARRL Petition raises two questions of statutory delegation. First, can the Commission lawfully construe Section 302a to authorize unlicensed devices, particularly in

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[10] 47 U.S.C. Sec. 302a(a).

[11] *Certification of Equipment in the 24.05-24.25 GHz Band*, 16 FCC Rcd 22337 at para. 12 (2001).

[12] ARRL Petition at 1.

[13] "The Commission must at some point acknowledge the fact that Part 15 devices *are allowed* under the Communications Act only where they have no interference potential to licensed services." ARRL Petition at 3 (*quoting* ARRL Reply Comments) (emphasis added).

[14] *See generally* 47 C.F.R. Secs. 15.201-15.525.

[15] ARRL Petition at 10-11, *referring to* 47 C.F.R. Sec. 15.5.

bands shared with licensed services? Second, who decides whether the Commission's Part 15 regulations protecting licensed services are "reasonable" under Section 302a?

Once asked, both question all but answer themselves. As shown below, a long line of uniform precedent gives the Commission broad discretion to construe its own statute, and even greater discretion when applying its expertise to regulate in technical areas. Moreover, even if Part 15 approvals otherwise lay beyond the express language of the Act, the Commission would still have ample authority to "fill in the gaps."

2. The Commission's construction of the Communications Act is entitled to great deference.

No principle of administrative law is better established: "Considerable weight should be accorded to an executive department's construction of a statute it is entrusted to administer."[16] Of course the principle applies equally to an independent agency, such as the Commission.[17] As the agency charged with administering the Communications Act, the Commission is entitled to wide latitude in its constructions. ARRL has offered nothing to overcome the strong presumption of validity supporting the Commission's construction that Section 302a authorizes unlicensed operation.

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[16] *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.* 467 U.S. 837, 844 (1984). *See also County of Los Angeles v. U.S. Dep't of Health and Human Services*, 192 F.3d 1005, 1013, 1016 (D.C. Cir. 1999); *Association of Bituminous Contractors, Inc. v. Social Security Administration*, 156 F.3d 1246, 1251 (D.C. Cir. 1998); *Tax Analysts v. IRS*, 117 F.3d 607, 613 (D.C. Cir. 1997).

[17] *Capital Cities Cable, Inc. v. Crisp*, 467 U.S. 691, 700 (1984) (upholding FCC action); *Lakeshore Broadcasting, Inc. v. FCC*, 199 F.3d 468, 472 (D.C. Cir. 1999) (same); *Washington Ass'n for Television and Children v. FCC*, 712 F.2d 677, 684 (D.C. Cir 1983) (same). *See also National Wildlife Federation v. EPA*, 2002 U.S. App. LEXIS 7232 (D.C. Cir. 2002).

3. The Commission is entitled to extraordinary deference when applying its technical expertise.

Beyond the latitude ordinarily given to an agency construing its own statute, an agency is entitled to further deference in the exercise of its particular technical expertise. The D.C. Circuit reaffirmed this long-standing principle just last year: the Commission, in adopting regulations to accommodate new technologies, "functions as a policymaker and, inevitably as a seer -- *roles in which it will be afforded the greatest deference by a reviewing court.*"[18]

As communications technologies evolve, Congress cannot be expected to stay abreast of the engineering journals to update the regulatory scheme for each innovation. That is the Commission's job:

> The Commission's authority is stated broadly to avoid the need for repeated congressional review and revision of the Commission's authority to meet the needs of a dynamic, rapidly changing industry. Regulatory practices and policies that will serve the "public interest" today may be quite different from those that were adequate to that purpose [in the past], or that may further the public interest in the future.[19]

Keeping up with technology requires room to construe an earlier statute in light of later technical developments. The U.S. Supreme Court put it plainly:

> [T]he principle of deference to administrative interpretations has been consistently followed by this Court whenever decision as to the meaning or reach of a statute has involved reconciling conflicting policies, and a full understanding of the force of the statutory policy in the given situation

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[18](upholding FCC plan for relocating fixed microwave users to accommodate innovative satellite services), *quoting Telocator Network of America v. FCC*, 691 F.2d 525, 538 (D.C. Cir. 1982) (upholding FCC plan for sharing frequencies among competing users).

[19] *Washington Utilities & Transportation Comm'n v. FCC*, 513 F.2d 1142 (9th Cir.), *cert. denied*, 423 U.S. 836 (1975).

> has depended upon more than ordinary knowledge respecting the matters subject to agency regulations."[20]

No one who reads the Commission's Part 15 rules would deny that they "depend[] upon more than ordinary knowledge." In the words of the D.C. Circuit:

> We confront on review an arcane, fast-moving field of technology . . . . In these circumstances *a reviewing court owes particular deference to the expert administrative agency's policy judgments and predictions* . . . .[21]

The Part 15 rules on unlicensed operation are arguably the most "arcane," and certainly the most "fast-moving," of any in the Commission's Rules. They qualify for the highest degree of deference.

4. The Commission can "fill in the gaps" in its statute.

Finally, even without the customary deference to agency construction, the Commission would still have a separate mandate to authorize Part 15 devices. The U.S. Supreme Court reaffirmed this principle earlier this year:

> The latter [subject of regulation] might be expected to evolve in directions Congress knew it could not anticipate. As it was in *Chevron U.S.A. Inc. v. NRDC,* the subject matter here is technical, complex, and dynamic; and *as a general rule, agencies have authority to fill gaps where statutes are silent.*[22]

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[20] *Chevron U.S.A. Inc. v. NRDC, supra*, 467 U.S. at 844.

[21] *Wold Communications, Inc. v. FCC*, 735 F.2d 1465, 1468 (D.C. Cir. 1984) (emphasis added) (satellite communications). *See also Exxon Company U.S.A. v. Federal Energy Regulatory Commission*, 182 F.3d 30, 37 (D.C. Cir. 1999).

[22] *National Cable & Telecommunications Ass'n, Inc. v. Gulf Power Co.*, 122 S. Ct. 782, 806 (2002) (emphasis added; citation details omitted) (upholding FCC interpretation of Communications Act). *See also Chevron U.S.A. Inc. v. NRDC, supra*, 467 U.S. at 843 ("The power of an administrative agency to administer a congressionally created . . . program necessarily requires the formulation of policy and the making of rules to fill any gap left, implicitly or explicitly, by Congress.") (ellipsis in original), *quoting Morton v. Ruiz*, 415 U.S.

The evolution of Part 15 devices easily qualifies as "technical, complex, and dynamic." The legal precedents leave no serious doubt that the Commission is authorized to approve them under appropriate regulations.

D. Decades of Tacit Acceptance Signify Congress's Approval of Unlicensed Devices.

ARRL acknowledges the Commission permitted unlicensed devices as early as 1938, just four years after passage of the Communications Act.[23] Had such devices contravened congressional intent, Congress could easily have enacted a remedy at any time during the past 64 years. It has not done so.

1. Congress has often acknowledged unlicensed operation under Part 15.

Congress's inaction cannot be attributed to ignorance of unlicensed operations. To the contrary, Congress has several times recognized not only the ongoing existence, but also the importance, of Part 15 devices:

- In enacting Section 302a -- which ARRL challenges as a statutory basis for Part 15 -- Congress specifically discussed the need for proper regulation of garage door openers, a category of unlicensed devices.[24]

- In enacting the Electronic Communications Privacy Act of 1986, Congress described cordless telephones as

> a type of telephone which uses a short range (a few hundred feet) radio link between the handset and the base unit in place of the usual wire. *Such telephones are regulated under Part 15, Subpart*

199, 231 (1974).

[23] ARRL Petition at 6-7.

[24] P.L. 90-379, S. Rep. 1276, *reprinted at* 1968 U.S. Code Cong. & Admin. News 2486, 2488.

> *E of the rules of the Federal Communications Commission (FCC), and are not licensed*.[25]

- The Balanced Budget Act of 1997 instructed the Commission to auction off certain frequency bands which, among other criteria, had not then been

> *allocated or authorized for unlicensed use pursuant to part 15 of the Commission's regulations* (47 C.F.R. Part 15), if the operation of services licensed pursuant to competitive bidding would interfere with operation of end-user products permitted under such regulations.[26]

(Not merely part of the legislative history, this language was enacted into law.)

2. Congress has ratified unlicensed operation by its acquiescence.

Congress impliedly ratifies a longstanding regulation by leaving it unchanged. This principle goes back at least to 1938, when the U.S. Supreme Court upheld a 14-year-old tax regulation in part by holding,

> Treasury regulations and interpretations long continued without substantial change, applying to unamended or substantially reenacted statutes, *are deemed to have received congressional approval and have the effect of law*."[27]

In *Beth Israel Hospital v. NLRB*, the Supreme Court again inferred from Congress's inaction that Congress "was satisfied to rely on [the agency] to continue to exercise the responsibility to strike the appropriate balance" among the competing interests at stake.[28] Similarly, in *International*

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[25] P.L. 99-508, H. Rep. 99-647, 99th Cong., 2d Sess. at 33 (June 19, 1986).

[26] Balanced Budget Act of 1997, P.L. 105-33 Section 3002(c)(1)(C)(v), 11 Stat. 261 (1997) (emphasis added).

[27] *Helvering v. Winmill*, 305 U.S. 79, 83 (1938) (emphasis added). *See also United States v. Correll*, 389 US 299, 305-06 (1967) (same).

[28] 437 US 483, 497 (1978).

Brotherhood of Electrical Workers v. NLRB, the D.C. Circuit interpreted Congress's decision to leave a specific statutory provision unchanged as ratifying the responsible agency's forty-year construction.[29]

Ratification is all the more clear when Congress amends other parts of a statute while leaving the provision at issue unchanged.[30] Congress has amended the Communications Act dozens of times. Any of those amendments, including the major overhaul in the Telecommunications Act of 1996, could easily have included a provision to eliminate unlicensed devices. Far from banning them, however, Congress acted to *protect* unlicensed devices the following year, in the Balanced Budget Act of 1997.[31]

In short, Congress has often shown its awareness that the Commission has authorized unlicensed devices. Not only has Congress allowed that construction to stand for more than sixty years, but it has expressly protected the devices that result. Numerous uncontroverted holdings of the U.S. Supreme Court and the D.C. Circuit make plain that Congress's acquiescence amounts to ratification.

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[29] 814 F.2d 697, 711 (D.C. Cir. 1987).

[30] *See Merrill Lynch, Pierce, Fenner & Smith v. Curran*, 456 U.S. 353, 382 n.66.

[31] See note 26 and accompanying text.

E. ARRL's Arguments Against Delegated Authority are Defective.

ARRL raises two specific arguments that purport to show the Commission lacks authority to authorize unlicensed devices. Neither one can withstand scrutiny.

1. The legislative history of Section 302a affirmatively supports Part 15.

ARRL tries to invoke the legislative history of Section 302a to limit the provision's scope. Specifically, ARRL points to a passage in the Senate Report that discusses shifting the burden of technical compliance from end users to manufacturers, and argues this must be the sole purpose of the statute.[32] That line of reasoning runs into insurmountable problems.

First, the Senate Report justified the need to shift the compliance burden in part by discussing interference from malfunctioning garage door openers, which are unlicensed Part 15 intentional emitters.[33] Congress certainly did not intend to approve the continuing interference -- yet it did not ban the devices. The legislation makes sense only if Congress sought to place the compliance burden on manufacturers of garage door openers, along with those of other RF emitters. Thus, even if ARRL were right, and the sole purpose of the statute were to make manufacturers responsible for compliance, unlicensed devices would still be included in the new regulatory regime.

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[32] ARRL Petition at 8, *citing* P.L. 90-379, S. Rep. 1276, *reprinted at* 1968 U.S. Code Cong. & Admin. News 2486, 2486-88. In addition to the Senate Report, ARRL quotes letters from the executive branch and the Commission stating their respective views on the legislation. But these provide little insight into Congress's intent, which is all that matters here.

[33] P.L. 90-379, S. Rep. 1276, *reprinted at* 1968 U.S. Code Cong. & Admin. News 2486, 2488.

Second, just a few weeks ago, the U.S. Court of Appeals for the D.C. Circuit *rejected* similar attempts to use legislative history to narrow application of the Communications Act: "Of course such explanatory language [setting out one application of the statute] can't be assumed to be exclusive; legislative or agency explanations of a provision may naturally tend to focus on its most salient features."[34] ARRL may not rely on legislative history to single out a sole purpose for the statute to the exclusion of others.

2. Nothing in the Communications Act rules out unlicensed devices.

Finally, ARRL argues that Section 301 of the Communications Act requires licensing of all radio transmitters, save for the four categories exempted under Section 307(e) -- none of which includes Part 15 devices.[35] ARRL suggests that the four exemptions -- citizens band (CB), radio control (RC), aviation radio, and maritime radio -- constitute the complete universe of unlicensed operations permitted by Congress.[36]

Each of those four services was, at one time, subject to a licensing requirement. Section 307(e) thus amounts to an affirmative decision by Congress to *de-license* those particular

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[34] *WorldCom, Inc. v. FCC*, No. 01-1218, slip op. at 11 (D.C. Cir. May 3, 2002).

[35] ARRL Petition at 5-6.

[36] The one case that ARRL cites for its Section 301 view -- indeed, the only case it cites anywhere in its Petition -- *declined to decide* the only Section 301 issue it raised. *Todisco v. United States*, 298 F.2d 208, *cert. denied*, 368 U.S. 989 (1962), is a criminal case whose evidence included conversations taped by means of a radio transmitter worn by a government agent. The defendant challenged his conviction in part on the ground that the agent lacked a Commission license for the transmitter. "This issue we do not reach," said the court, 298 F.2d at 211, deciding that even absence of a license would not render the evidence inadmissible. *Id*. In view of that holding, the court's subsequent remark, "Here the purpose of the licensing law is to prevent interference with radio communications," *id*., can only be *dictum*. Even if it were not, however, we fail to see how the case would advance ARRL's position.

services. But Congress did not even suggest, much less state explicitly, that it meant to preclude other unlicensed operations.[37] To the contrary, the legislative history underlying the 1982 amendments shows the decision to de-license CB and RC resting on purely practical considerations. Noting the substantial costs of processing and granting millions of license

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[37] Section 307(e) reads:

> (e) Operation of certain radio stations without individual licenses.
>
> (1) Notwithstanding any license requirement established in this chapter, if the Commission determines that such authorization serves the public interest, convenience, and necessity, the Commission may by rule authorize the operation of radio stations without individual licenses in the following radio services:
>
> (A) the citizens band radio service;
>
> (B) the radio control service;
>
> (C) the aviation radio service for aircraft stations operated on domestic flights when such aircraft are not otherwise required to carry a radio station; and
>
> (D) the maritime radio service for ship stations navigated on domestic voyages when such ships are not otherwise required to carry a radio station.
>
> (2) Any radio station operator who is authorized by the Commission to operate without an individual license shall comply with all other provisions of this chapter and with rules prescribed by the Commission under this chapter.
>
> (3) For purposes of this subsection, the terms "citizens band radio service", "radio control service", "aircraft station" and "ship station" shall have the meanings given them by the Commission by rule.

47 U.S.C. Sec. 307(e).

applications, Congress observed that de-licensing "will produce significant savings without impairing important regulatory interests."[38]

While the 1996 legislative history is silent concerning Congress's rationale for de-licensing the aviation radio and maritime radio services, the provision comes in a section titled "Elimination of Unnecessary Commission Regulations and Functions."[39] That plainly suggests Congress was merely clearly cleaning out superfluous rules. Certainly there is nothing to indicate that Congress objected to other services being unlicensed.

There is no support for ARRL's contention that the de-licensing of these four particular services established all possible instances of unlicensed operation. To the contrary, even after de-licensing, Congress specifically required the operator to "comply with all other provisions of this chapter and with rules prescribed by the Commission," thus acknowledging the Commission's regulatory authority outside the licensing process.[40] In finding no need to provide alternative authority for regulating these newly unlicensed services, Congress recognized that the Commission's power to regulate extends beyond its power to license. (And, of course, the interference-preventing rules under Part 15 represent one such form of non-licensing regulation.)

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[38] P.L. 97-259, S. Rep. No. 97-404 at 37 (May 19, 1982), *reprinted at* 1982 U.S. Code Cong. & Admin. News 2237, 2280. At the time of the legislation, there were estimated to be some eight million unlicensed CB operators, a "situation which could create a regulatory nightmare for the Commission if serious attempts were made to remedy this situation." *Id.*

[39] Telecommunications Act of 1996, Sec. 403, 110 Stat. 56, 130 (Feb. 8, 1996), *reprinted at* 1996 U.S. Cong. & Admin. News No. 1 (unnumbered).

[40] 47 U.S.C. Sec. 307(e)(2). Similarly, Congress emphasized that its 1982 action was directed to "only the 'de-licensing' (of individual licenses) of the CB and RC services, and not the 'deregulation' of such services." P.L. 97-259, S. Rep. No. 97-404 at 37 (May 19, 1982), *reprinted at* 1982 U.S. Code Cong. & Admin. News 2237, 2280.

In short, Congress relied on the Commission's having the same authority that ARRL contends does not exist: the authority to regulate unlicensed operation.

F. Unlicensed Operation Is in the Public Interest.

At this moment in technological history, it is hardly necessary to argue the public interest in unlicensed Part 15 devices. They are now a major component of the Nation's telecommunications infrastructure. Not only are Part 15 devices an important industry in their own right, but they contribute to the success and global competitiveness of many other industries, including manufacturing, retail, transportation, health care, government (including public safety and law enforcement), education, energy, communications, finance -- indeed, every sector of the economy. Part 15 also helps to further the Commission's long-term goals by conserving licensed spectrum for longer-range communications.

Even seven years ago, the Commission was able to say:

> These Part 15 devices [in the 2400-2483.5 MHz band] provide a variety of consumer and business oriented services that benefit individuals, commercial services, and private spectrum users, and they also have applications for public safety and medical needs. Benefits include lower costs of energy through automatic meter reading and optimized power generation, low-cost broadband access to Internet services and other information networks for schools, libraries, telecommuters and home offices, mobility of telephonic and computer communications within offices and homes without extensive reconstruction and wiring, immediately installable video conferencing among and between buildings for educational instruction, health care monitoring and judicial procedures without construction of special studio facilities, safe transport of chemicals and petroleum products through low-cost and easily deployable pipeline monitoring services, and control for potentially tens of thousands of traffic lights, at less than one-third the cost of wireline solutions, to ease road congestion, and significantly reduce pollution and new street construction.[41]

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[41] *Allocation of Spectrum Below 5 GHz*, 10 FCC Rcd 4769, 4786 (1995).

Today the list of Part 15 applications would be many times longer, and the quantities of equipment in use many times greater. Users find countless applications for reliable, inexpensive, high-capacity radios they can install and move without the costs and delays of licensing. A few examples:

- ***Commercial applications*** include wireless LANs and PBXs, retail cash registers and inventory control, airport baggage handling, package delivery, automated meter reading and alarm services, and warehouse picking operations, including catalog sales fulfillment.

- ***Hospitals*** and other health care facilities use unlicensed devices for patient telemetry, inventory and billing, and bedside checks on medication.

- ***Stock transactions*** -- most of the transactions on the New York Stock Exchange are mediated by unlicensed wireless terminals.

- ***Internet access*** uses wireless communications links for broadband speeds at distance up to 40 km.

- ***Consumers***, as noted above, enjoy cordless phones, nursery monitors (both sound-only and video), wireless headphones and speakers, cordless computer mice and keyboards, toys of many kinds, and countless other products.

Wireless LANs -- the use of low-power radio devices to interconnect components of local area networks -- is a particularly fast-growing Part 15 application. These systems have long been used in businesses, where they are cost- and performance-competitive with wire-in-the-wall installations. One standard in particular -- IEEE 802.11b, or "Wi-Fi" -- has recently found a fast-expanding home market as well. In one variation, thousands of sites such as airport lounges and coffee houses have set up inexpensive Wi-Fi access points so customers can use their laptops for on-site wireless Internet access.

Part 15 devices contribute not only convenience, but economic growth. Currently unlicensed devices are one of the few bright spots in an otherwise slow technology sector. The wireless LAN sector *alone* will reach $2.4 *billion* in 2002, with a projected 49% increase into 2003.[42] Yet wireless LANs represent only a small part of the market for unlicensed devices, which also includes a host of consumer items (cordless phones, nursery monitors, wireless audio accessories, toys, etc.) together with non-LAN commercial applications. Newer types of Part 15 devices, including Bluetooth, ultra-wideband, and the systems recently authorized in ET Docket No. 99-231, will all add to the mix.

In short, Part 15 devices contribute convenience and prosperity, without any need for dedicated spectrum. A former Commission staffer did not exaggerate in calling Part 15 "the jewel in the FCC's crown."[43] The industry has earned a finding that its products are in the public interest.

CONCLUSION

Because the Communications Act has no words that say, expressly, "We authorize Part 15," ARRL concludes Part 15 is unauthorized. But that result ignores a long-established body of law on statutory construction. ARRL must disregard the scores of cases that defer to an agency's interpretation of its own statute, and the dozens more that give extraordinary deference

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[42] Source: Cahners In-Stat/MDR. Other sources reach parallel results. For example, Gartner Dataquest expects the total worldwide market for wireless LAN equipment intended for PC and personal digital assistant (PDA) connectivity to reach $3.4 billion by 2005, with annual worldwide shipments of wireless LAN adapters exceeding 30 million units by 2005.

[43] Remarks of Gregory Czumak at "Opportunities for New Wireless Technologies," Federal Communications Commission, Washington DC (February 16, 2000).

to an agency exercising its technical expertise. ARRL likewise must neglect the cases that acknowledge an agency's authority to fill in the gaps in a fast-moving technological environment.

ARRL must similarly overlook Congress's choosing to let the Part 15 regulations stand, while amending other parts of the Communications Act dozens of times over. The case law tells us that Congress's action (or inaction) amounts to ratification. As if to remove any doubt of its approval, Congress enacted language specifically to protect Part 15 spectrum from auction.

ARRL's efforts to invoke legislative history as narrowing the scope of the Communications Act not only run counter to recent precedent, but pass over specific references to unlicensed devices in that same legislative history.

Finally, ARRL's argument that Congress has approved only four unlicensed services, none of which is Part 15, finds no support in the statute.

Overall, ARRL's argument that Part 15 is unauthorized lacks any support in the law. The Commission must deny its Petition.

Respectfully submitted,

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May 31, 2002

CERTIFICATE OF SERVICE

I, Deborah N. Lunt, a secretary with the law firm of Fletcher, Heald & Hildreth, P.L.C., hereby state that a true copy of the foregoing "Opposition to Petition for Reconsideration of ARRL, the National Association for Amateur Radio" was sent the 31st day of May, 2002, by email and hand delivery (except as noted) to the following:

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